

## INSTRUCTIONS FOR TABLE 1

### SELECTION OF EXPOSURE PATHWAYS

<p><b>PURPOSE OF THE TABLE:</b></p> <ul style="list-style-type: none"> <li>To assist in project planning</li> <li>To accompany the site conceptual model</li> <li>To present possible Receptors, Exposure Routes, and Exposure Pathways</li> <li>To present the rationale for selection or exclusion of each Exposure Pathway</li> <li>To communicate risk information to interested parties outside EPA</li> <li>To establish a framework for the generation of subsequent Planning Tables. All subsequent tables should be built from the information contained in Table 1.</li> </ul>	
<p><b>INFORMATION DOCUMENTED:</b></p> <ul style="list-style-type: none"> <li>Exposure Pathways that were examined and excluded from analysis</li> <li>Exposure Pathways that will be qualitatively and quantitatively evaluated in the risk assessment.</li> </ul>	
<p><b>TABLE NUMBERING INSTRUCTIONS</b></p> <ul style="list-style-type: none"> <li>Complete one copy of this table for each risk assessment. Consult the EPA risk assessor to determine if the risk assessment applies to an entire site, a single operable unit, or some other division of the site.</li> <li>Number it Table 1.</li> <li>The table should show each Exposure Pathway considered.</li> </ul>	<p><i>In the Planning Tables, an Exposure Pathway is defined as each unique combination of Scenario Timeframe, Medium, Exposure Medium, Exposure Point, Receptor Population, Receptor Age, and Exposure Route.</i></p>
<b>HOW TO COMPLETE/INTERPRET THE TABLE</b>	
<b>Column 1 - Scenario Timeframe</b>	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The time period (current and/or future) being considered for the Exposure Pathway.</li> </ul>	
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right. If two Exposure Pathways are identical, Current/Future can be used to describe a future and a current pathway.</li> </ul>	<p><i>Current</i> <i>Future</i> <i>Current/Future</i> <i>Not Documented</i></p>
<b>Column 2 - Medium</b>	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The substance (e.g., air, water, soil) that is a potential source of contaminants in the Exposure Medium. (The Medium will sometimes = the Exposure Medium.) Usually, the Medium is that targeted for possible remediation.</li> </ul>	

## INSTRUCTIONS FOR TABLE 1

### SELECTION OF EXPOSURE PATHWAYS (continued)

<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right.</li> </ul>	<p><i>Groundwater</i>  <i>Leachate</i>  <i>Sediment</i>  <i>Sludge</i>  <i>Soil</i>  <i>Surface Water</i>  <i>Debris</i>  <i>Liquid Waste</i>  <i>Solid Waste</i>  <i>Air</i>  <i>Surface Soil</i>  <i>Subsurface Soil</i>  <i>Other</i></p>
<b>Column 3 - Exposure Medium</b>	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The contaminated environmental medium to which an individual may be exposed. This includes the transfer of contaminants from one Medium to another.</li> </ul> <p><i>For example:</i></p> <ol style="list-style-type: none"> <li><i>Contaminants in Groundwater (the Medium) remain in Groundwater (the Exposure Medium) and are available for exposure to receptors.</i></li> <li><i>Contaminants in Groundwater (the Medium) may be transferred to Air (the Exposure Medium) and are available for exposure to receptors.</i></li> <li><i>Contaminants in Sediment (the Medium) may be transferred to Fish Tissue (the Exposure Medium) and are available for exposure to receptors.</i></li> </ol>	
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right.</li> </ul> <p><i>Note: In the case of two media transferring contamination to the same Exposure Medium, two separate Exposure Pathways should be included in Table 1. See Example Scenario No. 5.</i></p>	<p><i>Groundwater</i>  <i>Leachate</i>  <i>Sediment</i>  <i>Sludge</i>  <i>Soil</i>  <i>Surface Water</i>  <i>Debris</i>  <i>Liquid Waste</i>  <i>Solid Waste</i>  <i>Air</i>  <i>Plant Tissue</i>  <i>Animal Tissue</i>  <i>Fish Tissue</i>  <i>Spring Water</i>  <i>Surface Soil</i>  <i>Subsurface Soil</i>  <i>Particulates</i>  <i>Vapors</i>  <i>Other</i></p>

## INSTRUCTIONS FOR TABLE 1

### SELECTION OF EXPOSURE PATHWAYS (continued)

Column 4 - Exposure Point	
<p>Definition:</p> <ul style="list-style-type: none"> <li>An exact location of potential contact between a person and a chemical or radionuclide within an Exposure Medium.</li> </ul> <p><i>For example:</i></p> <p>1)           Contaminants are in Groundwater (the Medium and the Exposure Medium) and exposure to Aquifer 1 - Tap Water (the Exposure Point) is evaluated.</p> <p>2)           Contaminants in Groundwater (the Medium) may be transferred to Air (the Exposure Medium) and exposure to Aquifer 1 - Water Vapors at Showerhead (the Exposure Point) is evaluated.</p> <p>3)           Contaminants in Sediment (the Medium) may be transferred to Fish Tissue (the Exposure Medium) and Trout from Dean's Creek (the Exposure Point) is evaluated.</p>	
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Describe the Exposure Point as text in the table. Multiple Exposure Points may be recorded in the same cell/row if all other aspects of their Exposure Pathways (Scenario Timeframe, Medium, Exposure Medium, Receptor Population, Receptor Age, and Exposure Route) are the same. See Example Scenario No. 1.</li> </ul>	
Column 5 - Receptor Population	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The exposed individual relative to the Exposure Pathway considered.</li> </ul>	<p><i>For example, a resident (Receptor Population) who drinks contaminated groundwater.</i></p>
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right.</li> </ul> <p><i>Note: If there are multiple Trespassers/Visitors of different ages, the use Receptor Age (see Column 6) to distinguish between the different receptors. For example, use Trespasser/Visitor with Adolescent (or Child) to indicate youthful trespassers, and Trespasser/Visitor with Adult for adult visitors.</i></p>	<p>Resident Industrial Worker Commercial Worker Construction Worker Other Worker Golfer Jogger Fisher Hunter Fisher/Hunter Swimmer Other Recreational Person Child at School/Daycare/ Playground Trespasser/Visitor Farmer Gardener Gatherer Other</p>

## INSTRUCTIONS FOR TABLE 1

### SELECTION OF EXPOSURE PATHWAYS (continued)

<b>Column 6 - Receptor Age</b>	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The description of the exposed individual as defined by the EPA Region or dictated by the site.</li> </ul> <p><i>For example, an adult (Receptor Age) resident (Receptor Population) who drinks contaminated groundwater.</i></p>	
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right.</li> </ul>	<p><i>Child</i>  <i>Adult</i>  <i>Adolescents (teens)</i>  <i>Pre-Adolescents</i>  <i>Not Documented</i>  <i>Child/Adult</i>  <i>Geriatric</i>  <i>Sensitive</i>  <i>Other</i>  <i>Infant</i>  <i>Toddler</i>  <i>Pregnant</i></p>
<b>Column 7 - Exposure Route</b>	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The way a chemical or radionuclide comes in contact with a person (e.g., by ingestion, inhalation, dermal contact).</li> </ul>	
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right.</li> </ul>	<p><i>Inhalation</i>  <i>Ingestion</i>  <i>Combined (Inhalation and Ingestion)</i>  <i>Dermal</i>  <i>Not Documented</i>  <i>External (Radiation)</i></p>
<b>Column 8 - Type of Analysis</b>	
<p>Definition:</p> <ul style="list-style-type: none"> <li>The level of evaluation (quantitative or qualitative) to be performed for the Exposure Pathway based on site-specific analysis.</li> </ul>	
<p>Instructions:</p> <ul style="list-style-type: none"> <li>Choose from the picklist to the right.</li> </ul> <p><i>Note: Present pathways that were not further analyzed (Type of Analysis = None) along with the rationale for their exclusion to document that the pathway was considered.</i></p>	<p><i>Quant (Quantitative)</i>  <i>Qual (Qualitative)</i>  <i>None</i></p>

## INSTRUCTIONS FOR TABLE 1

### SELECTION OF EXPOSURE PATHWAYS (continued)

Column 9 - Rationale for Selection or Exclusion of Exposure Pathway	
Definition: <ul style="list-style-type: none"><li>The reason the Exposure Pathway was selected or not selected for quantitative or qualitative analysis.</li></ul>	
Instructions: <ul style="list-style-type: none"><li>Document the reason for selecting or excluding an Exposure Pathway for analysis. Provide a narrative rationale for each Exposure Pathway.</li></ul>	<i>Consult the EPA risk assessor for the rationale codes.</i>